

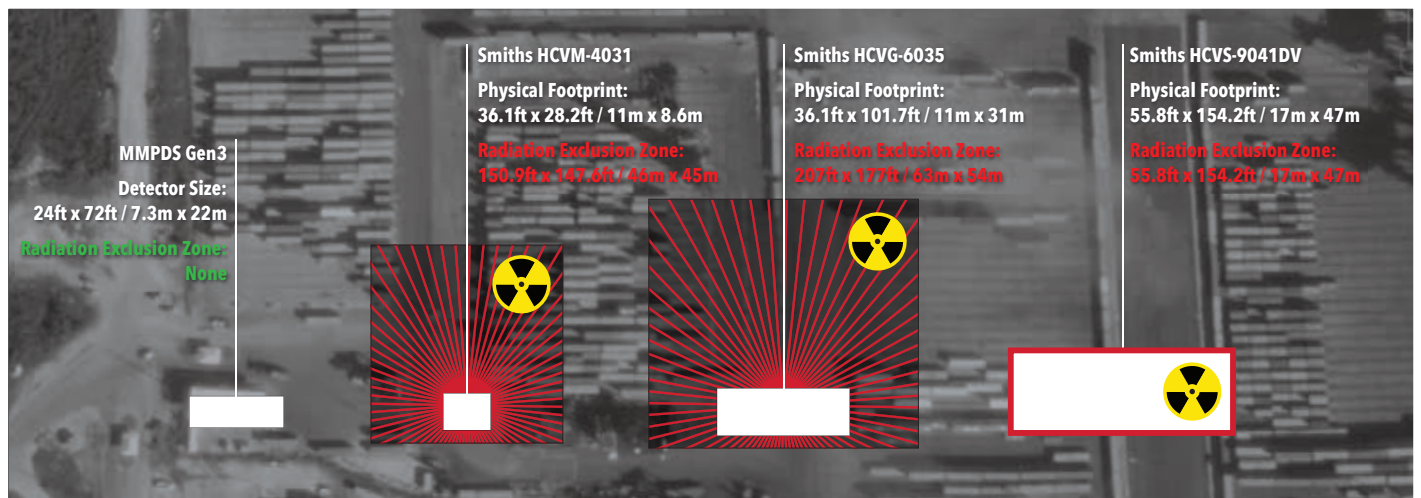


## MMPDS Gen3 versus Smiths X-RAY

*The Multi-Mode Passive Detection System Gen3 is completely passive—meaning there are no radiation or safety issues of any kind.*

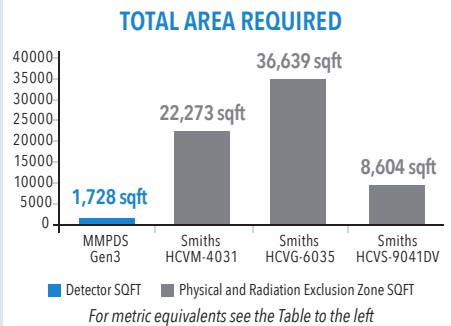
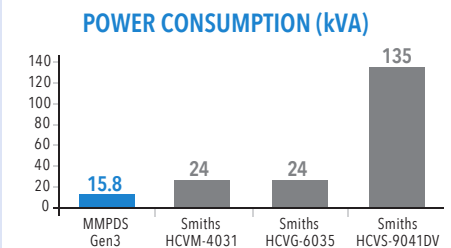
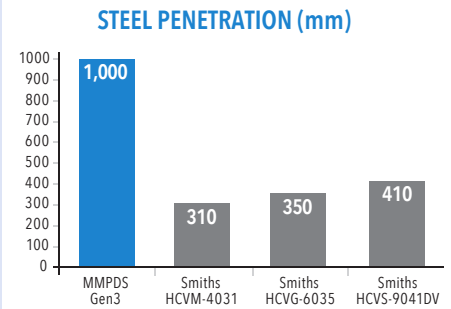
Scanning equipment can generally be classified into two main categories; active and passive. Active systems include x-ray and/or radiation technologies which apply radiation or energy to the environment and may pose health risks to people, plants, animals and other organics. A passive system makes use of only the natural environment and does not add any radiation in order to conduct scans.

MMPDS Gen3 simply uses naturally existing cosmic ray muons to scan cargo and, therefore, personnel are never exposed to harmful radiation. Containers of food and other perishables can also be scanned with no risk to the contents or to humans if they are present. The system uses only what mother nature provides—natural cosmic ray energy—and requires no safety or exclusion zones or dedicated buildings to contain high energy radiation sources.



## Product Comparison, continued

System Model	MMPDS Gen3	Smiths HCVM-4031*	Smiths HCVG-6035*	Smiths HCVS-9041DV*
System Type	Fixed Site	Mobile	Gantry	Fixed Site
Physical Footprint (area)	1,728sqft / 161sqm	1,018 sqft / 94.5sqm	3,671 sqft / 341sqm	8,604 sqft / 799 sqm
Physical Footprint (dimensions)	24ft x 72ft / 7.3m x 22m	36.1ft x 28.2ft / 11m x 8.6m	36.1ft x 101.7ft / 11m x 31m	55.8ft x 154.2ft / 17m x 47m
Radiation Exclusion Zone (area)	None (Passive)	22,273 sqft / 2,070 sqm	36,639sqft / 3,402 sqm	8,604 sqft / 799 sqm
Radiation Exclusion Zone (dimensions)	None (Passive)	150.9ft x 147.6ft / 46m x 45m	207ft x 177ft / 63m x 54m	55.8ft x 154.2ft / 17m x 47m
Absorbed Dose per scan (μSv)	None (Passive)	<7μSv	<60μSv	<256μSv
Throughput (trucks per hour)	>20**	20	23	20
Operators to achieve stated throughput	1	2	2	3
Energy Level	None (Passive)	4-6 MeV	4-6 MeV	9 MeV
Steel penetration (mm)	>1000mm	<310mm @ 6MeV	<350mm @ 6MeV	<410mm @ 9MeV
Product Cost	\$ \$	\$ \$	\$	\$ \$ \$ \$
Sustainment Cost	Low	High	High	Very high
Gamma detection	Included	Extra cost	Extra cost	Extra cost
Neutron detection	Extra cost	Extra cost	Extra cost	Extra cost
Training requirements	Minimal	High	High	Very High
Average power	15.8 kVA	24 kVA	24 kVA	135 kVA



\*Source - Smiths Detection website. \$ - modest | \$\$ - moderate | \$\$\$ - expensive | \$\$\$\$ - very expensive

\*\*MMPDS Gen3 can quickly clear a typical 40-foot shipping container that does not contain a threat or material of interest. Material discrimination scan times vary based on user defined thresholds. Please contact Decision Sciences for details on how to customize a system for your needs.

## About Decision Sciences

Decision Sciences, a provider of advanced security and contraband detection products, is headquartered in San Diego, CA and has additional offices in Washington, D.C. and Singapore. Decision Sciences brings together cutting-edge science, hardware and software development, systems integration and manufacturing to improve the safety and security of the global community. Based on revolutionary and disruptive technology originally invented by physicists at the U.S. Department of Energy Los Alamos National Laboratory, the Multi-Mode Passive Detection System (MMPDS) was subsequently developed with considerable private sector investment and expertise. The MMPDS is a totally passive, safe, effective and automated scanning system for quickly detecting, locating and identifying unshielded to heavily shielded radiological and nuclear threats, explosives and has the ability to assist operators in finding other contraband including weapons, alcohol, cigarettes/tobacco, drugs/narcotics, precious metals, smuggled humans and numerous other items of interest and anomalies.



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